Amendments to the Claims:

1. (Currently Amended) A method of transmitting a radio signal, the method comprising implementing a protocol stack having at least a physical layer and a medium access control layer ~~including~~, the medium access control layer directing data from at least one application to a plurality of transport channels ~~which are multiplexed to~~ in accordance with a bit class of the data, processing each transport channel in accordance with a scheme dependent upon the bit class, and multiplexing the transport channels to produce a physical layer signal~~, each transport channel being processed in a respectively selected manner~~, wherein a code identifying ~~said selected manners~~ each transport channel processing scheme is included in said physical layer signal.

2. (Currently Amended) A method according to claim [[1]]7, wherein said physical layer signal comprises a TDMA signal and said code is transmitted in predetermined locations.

3. (Original) A method according to claim 2, wherein said code is distributed across a plurality of bursts.

4. (Currently Amended) A radio transmitter comprising radio transmitting circuitry and processing means, the processing means being configured to implement a protocol stack having at least a physical layer and a medium access control layer including a plurality of transport channels, each carrying data of a particular bit class, which are multiplexed to produce a physical layer signal, each transport channel being processed in ~~a respectively selected manner~~ accordance with a scheme dependent upon the bit class, wherein the processing means is configured to include a code identifying said selected manners in said physical layer signal.

5. (Currently Amended) A radio transmitter according to claim [[4]]11, wherein said physical layer signal comprises a TDMA signal and said code and said code is transmitted in predetermined locations.

6. (Original) A radio transmitter according to claim 5, wherein said code is distributed across a plurality of bursts.

7. (New) A MAC layer for use in the method of claim 1.

8. (New) A physical layer for use with the MAC layer of claim 7.

9. (New) A physical layer according to Claim 8, in which the processing schemes are specified at call set-up when the radio signal is for use in a mobile communications system.

10. (New) A method according to claim 1, wherein said bit classes are associated with a quality of service requirement.

11. (New) A MAC layer for use in the method of claim 10.

12. (New) A physical layer for use with the MAC layer of claim 11.

13. (New) A physical layer according to Claim 12, in which the processing schemes are specified at call set-up when the radio signal is for use in a mobile communications system.

14. (New) A MAC layer implemented in the radio transmitter of claim 4.

15. (New) A physical layer for use with the MAC layer of claim 14.

16. (New) A physical layer according to claim 15, in which the processing schemes are arranged to be specified at call set-up when the radio signal is for use in a mobile communications system.

17. (New) A transmitter according to claim 4, in which said bit classes are associated with a quality of service requirement.

18. (New) A MAC layer implemented in the radio transmitter of claim 17.

19. (New) A physical layer for use with the MAC layer of claim 18.

20. (New) A physical layer according to claim 19, in which the processing schemes are arranged to be specified at call set-up when the radio signal is for use in a mobile communications system.